

Mr. Art Kleinrath  
Long-Term Surveillance and Maintenance Program  
U.S. Department of Energy  
Grand Junction Office  
2597 B: Road  
Grand Junction, Colorado 891503

Re: Comments on the Draft Long-Term Stewardship Plan for the Weldon Spring Site

Dear Mr. Kleinrath:

The U.S. Environmental Protection Agency (EPA) has reviewed the ALong-Term Stewardship Plan for the Weldon Spring, Missouri, Site@ - dated August 9, 2002. We appreciate the opportunity to review and comment on the plan. In our view, the plan provides a solid basis for the development of a successful long-term management program, and in certain aspects reflects progress since the initial draft plans were presented two years. In other areas little or no progress has been made. Clearly, there is much more planning and development yet to be done before this project could be said to achieve long-term care status. The enclosed comments and suggestions are intended to help improve the plan and advance the long-term management (stewardship) planning process. The focus of our review was to identify broad comments and we did not perform an exhaustive review, but we have provided specific comments where noted.

Please don't hesitate to call if you have any questions or would like to discuss any of these comments.

Sincerely,

Daniel R. Wall  
Project Manager  
Superfund Division

cc: Pam Thompson, WSSRAP  
Mike Duvall, Saint Charles County Division of Environmental Services  
Rick Hampel, Weldon Spring Citizens Commision  
Mimi Garstang, GSRA Director  
Robert Geller, MDNR Hazardous Waste Program

EPA Comments on DOE's  
Long-Term Stewardship Plan  
Weldon Spring Site, Missouri  
Dated August 9, 2002

General Comments:

- K-1 1. We recognize that there are competing ideas on whether this plan should be a stand alone document that contains all information, or whether it should be a bare bones document that makes heavy use of references to supporting information. The optimal approach is probably somewhere in between. While we make some suggestions, below, we are not trying to dictate which approach DOE should use, but we were not sure what DOE's intentions were. Whatever approach is used, it needs to be designed to direct the user to the key information necessary to conduct LTSM activities. Ultimately this plan will serve as a procedures manual for long-term management and it will need to be presented in a way that doesn't detract from this purpose. At this point, the main purpose of the LTSM Plan is to communicate how DOE plans to maintain the effectiveness/protectiveness of the remedial action over the long-term. As currently written, most of the document is background information, much of which seems only marginally related to LTSM activities. A reader must either navigate through unnecessary background information to get to the substance of the LTSM activities or skip the background information, some of which is necessary to a proper understanding of the substance. We would suggest that the background sections focus on a concise presentation of the key information and conditions that relate to LTSM, and that site history and other general information not directly relevant to LTSM be omitted or placed in an appendix. This is a suggestion and we recognize that there may be other approaches that could be used to direct the reader to the relevant information.

Response K-1: In Section 2, DOE intends to include the background information necessary to convey to the user contaminant source, local processes that controlled contaminant distribution, and final site conditions that represent a baseline for stewardship activities. DOE also must recognize site ecology and address demographics, land use, environmental setting, etc. Section 2 also includes information incorporated in response to requests from stakeholders. DOE has consolidated stewardship requirements in Section 3 to provide focus on those requirements. DOE expects users familiar with the site to immediately turn to Section 3. DOE directs the commentor to the August 2002 *Long-Term Stewardship Planning Guidance for Closure Sites*, which discusses appropriate background information the Department recommends be included in an LTS Plan. DOE will respond to specific comments regarding the content of Section 2, where this background information is presented.

- K-2 | 2. Related to comment No. 1 above, the plan lacks information on the final status of the site such as the nature and extent of residual soil contamination, residual risk, waste placement, cell design and as-built information. We have not done an analysis of what specific information is key to understanding or performing LTSM activities and we are not suggesting that all such information should be in the plan. We do suggest that the plan contain a concise description of available information on final status along with references to where a more thorough presentation of this information can or will be found. Depending on need, certain summary information ought to be considered for inclusion as well.

Response K-2: The plan will be revised to incorporate your comment, including adding a concise description of available information on final status and will reference the remedial action reports, which will include the detailed information, such as the cell design and as-built information.

- K-3 | 3. The draft LTSM plan contains no cost estimates. Ultimately the plan will need to contain a breakdown of annual activities and associated cost estimates.

Response K-3: DOE will incorporate funding estimates in the LTS Plan.

- K-4 | 4. The draft LTSM plan contains very little information on the identification of stakeholders, communication strategies, and the elements of public participation. We understand that DOE has already acknowledged the need to address this shortcoming.

Response K-4: See Responses [B-2](#) and [B-56](#).

- K-5 | 5. The plan lacks discussion on the CERCLA framework that would govern activities in the event contingencies are undertaken, in the event of remedy failure, or in the event the remedy needs to be reevaluated or changed due to new information.

Response K-5: Certain circumstances may arise during the stewardship phase of the Weldon Spring Site which require implementation of contingency actions. To the extent these actions can be anticipated and planned for (e.g. the quarry well field contingency plan), they have been incorporated into Records of Decision and RD/RA workplans. Unanticipated or extremely unlikely contingency actions will be subject to CERCLA processes prior to implementation. However, CERCLA provides for emergency and time critical actions, as well as more deliberative actions through the ROD modification process. The LTS Plan will provide additional discussion to clarify the authority under which contingencies will be implemented and remedies will be reevaluated

- K-6 | 6. Arguably the plan should contain action items and timetables for establishing institutional controls.

Response K-6: DOE does not believe the LTS Plan should contain action items and timetables for establishing institutional controls. This type of scheduling and planning would be better suited for an implementing CERCLA document such as an RD/RA workplan. The LTS Plan will serve to maintain the institutional controls.

- K-7 | 7. The LTSM plan should contain a process for modifying the content of the plan itself as appropriate based on continued development, new or changed information, the introduction of new technology, or the desire to optimize a process based on experience.

Response K-7: See [Response E-2](#).

Specific Comments:

- K-8 | 1. ' 1.1, pg. 1-1, line 1B It seems like the LTS Plan is as much an administrative or procedural plan as it is a technical plan, so we suggest omitting the word ~~A~~technical@ in the first sentence. Also, we recommend including a description of what DOE considers LTSM to be and what is meant by ~~A~~stewardship services@ right up front, so it's clear what DOE is referring to when it talks about LTSM.

Response K-8: DOE will delete the word "technical." See [response L-10](#) regarding revision to Section 1.1.

- K-9 | 2. ' 1.2, pg. 1-1B A look at the table of contents, leads one to believe that the section headed **ALegal and Regulatory Requirements@** would discuss the requirements applicable to the LTSM Plan, but all the information presented pertains to remedial action requirements. With the exception of the final groundwater ROD, which hasn't been signed yet, ARARs for the various remedial actions have already been described in detail in the applicable RODs. We don't see what purpose is served by repeating ARAR information here. We think a discussion of the final cleanup standards, which may or may not be based on ARARs, probably does have a place in the document, in the context of a discussion as to whether the remedial actions have achieved final cleanup standards, but we probably wouldn't put it here. Later in the Plan, in ' 3.8, DOE describes this section as laying out the regulatory requirements DOE will evaluate compliance with in its routine site inspections, but many of the ARARs mentioned in ' 1.2 are not regulatory requirements, *per se*, that must be monitored over the long-term. That's not to say there aren't any such requirements, only that they aren't discussed very clearly in ' 1.2 as such. The LTSM Plan doesn't explain very clearly the legal or regulatory (or policy) basis for its development, e.g., DOE Order 5400.1, the UMTRCA Guidance discussed briefly in connection with Table 1-2, etc., which we think would be informative to include in the document.

Response K-9: The ARARs that are listed in the table in Section 1.2 apply to postclosure stewardship and DOE feels these ARARs are relevant to the LTSM plan. The plan will be revised to include information regarding final cleanup standards and to explain more clearly the legal, regulatory or policy basis for the plan.

- K-10 | 3. ' 1.3, pg. 1-3B Much of the substance of this section overlaps the information in ' 1.1. We recommend combining the relevant information from both sections in ' 1.1 and omitting ' 1.3.

Response K-10: Refer to [Response B-2](#).

- K-11 | 4. ' 2.3.1, pg. 2-14B Explain what is meant by **A**inaccessible areas@ in the SE Drainage and **A**approved hypothetical residential child scenario@. Was the supplemental limit mentioned for the Southeast Drainage highway culvert approved in a ROD? Same question for the Frog Pond outlet. What does DOE mean by this statement with respect to the Frog Pond outlet: **A**DOE will provide long-term stewardship to manage the soil@?

Response K-11: “Inaccessible areas” in the Southeast Drainage refer to those areas with known contamination but are difficult to access for the current recreational visitor to the Southeast Drainage. The hypothetical child scenario was considered to represent the reasonably maximally exposed (RME) individual at the drainage, consistent with EPA’s risk assessment guidance. The descriptor “approved” was intended to convey that the various agencies involved (DOE, EPA, MDNR, and the Missouri Department of Health) agreed at the time that the hypothetical child scenario (and the associated exposure assumptions) would be considered the “RME” in evaluations for the Southeast Drainage. The word “approved” would be deleted and text clarified, as appropriate, in the revised LTS Plan.

Supplemental limits for both the Southeast Drainage and Frog Pond Outlet culverts were developed based on DOE Order 5400.5. DOE will develop institutional controls in accordance with the provisions of the Chemical Plant ROD and the Southeast Drainage EE/CA to ensure that contaminated soil around these two culverts will be appropriately managed in the event of highway construction activities. The text will be clarified in the next revision of the plan. See also [Response K-12](#).

- K-12 | 5. ' 2.3.1, pg. 2-14 --With regard to the contaminated pipes and soil at the culverts under Highway 94 and County Route D, it is indicated here and elsewhere in the plan that this waste material will be managed and/or disposed of at some point in the future when DOE can get access. No process is described to govern this activity. Does DOE envision these activities as CERCLA response actions pursuant to an existing ROD or some future decision document, or is there some other provision for handling these actions?

Response K-12 In the event that Highway 94 or Route D construction activities provide access, DOE would assess the extent of contamination. DOE considers the possible handling and disposal of these potentially small quantities of contaminated materials to be adequately addressed under CERCLA as planned for contingency actions. If EPA disagrees with this assessment, we would appreciate any specific suggestions you have to insert appropriate language into the LTS Plan. See also [Response K-5](#).

- K-13 | 6. ' 2.4.1.1, pg. 2-20B It is not clear how precipitation would help to reduce the mobility of uranium.

Response K-13: The text was referring to the precipitation of dissolved uranium in the groundwater as an attenuation mechanism; however, the geochemistry of the groundwater at the chemical plant does not support precipitation of uranium. Reference to precipitation in this discussion will be removed.

- K-14 | 7. ' 2.4.2, pg. 2-23 **B**The description of groundwater standards could be made more clear. Note that the IROD for the chemical plant groundwater established a standard for TCE.

Response K-14: The text and Table 2-4 will be revised to reflect that the TCE ARAR was established in the GWOU IROD.

- K-15 | 8. ' 2.4.3.1, pg. 2-30, text just below Table 2-5**B** The statement about where the uranium standard was exceeded might imply that it was coming from the disposal cell. Down a couple paragraphs, the statement says that remediation activities have lead to an increase in the level of nitroaromatic compounds. There should probably be some further explanation of the mechanism at work and the implications for long-term monitoring.

Response K-15: The text will be modified to state the uranium contamination in groundwater is beneath the former location of Raffinate Pits 3 and 4. Text will be added indicating that the excavation of contaminated soils in the Frog Pond area of nitroaromatic contamination most likely caused mobilization of these compounds and therefore temporary concentration increases in groundwater in this area. The implications for long term monitoring will be addressed with a revision to the disposal cell monitoring plan, which will recognize that baseline conditions should be established and then adjusted in order to allow groundwater conditions to achieve a more steady state following remedial activities. See also Responses [L-84](#) and [L-91](#).

- K-16 | 9. ' 2.5.2.1, pg. 2-37**B** Explain what **A**confirmed clean<sup>o</sup> means.

Response K-16: Text will be revised to clarify what confirmed clean means. See also [response L-96](#).

- K-17 | 10. ' 2.6, Institutional Controls**B** We don't necessarily agree that ICs are intended to prevent only **A**inadvertent<sup>o</sup> exposures. We recommend listing in some detail what the land and natural resource use assumptions were in each of the remedial action decisions, comparable land use restrictions to secure these controls, and the status of implementing these controls. Table 2-12, does this in part, but not in very much detail and it's difficult to tell from the table what the current status is of most of the ICs, although none of them appear to be in effect currently. Skipping back to Section 3, we expected there to be a fairly detailed discussion of how DOE planned to implement the outstanding ICs, but Section 3 seems basically to assume all ICs are in place and only discusses how the ICs will be monitored in the future. Permit and agreement administration is covered in two sentences in ' 3.10 on pg. 3-19. IC implementation needs to be addressed in more detail somewhere in the LTSM plan.

Response K-17: In the next revision of the LTS Plan, DOE will provide more detailed information regarding the specific restrictions proposed for the institutional controls.

- K-18 | 11. ' 3.0**B** We didn't find any information about what DOE staffing levels will be at the Site. The only places DOE on-site staffing is mentioned, directly or indirectly, are in ' 3.5, pg. 3-7, where

DOE indicates it plans to use office space and the laboratory in the administration building, but it doesn't say for what or by how many people, and in ' 3.7,

K-18  
cont.

pg. 3-12, where it mentions staffing at the interpretive center. From the description of the various inspections, follow up inspections, etc., it appears that the DOE inspectors will not be DOE employees routinely present on site. It also appears that DOE anticipates having other parties, such as the St. Charles County Sheriff's Department, do most or all of the every day checking up on things (see ' 3.3.1, for example). For each of the LTSM activities, DOE needs a specific list of the activities, who it anticipates will perform each activity, and, if its not going to be DOE, how and when DOE plans on securing real commitments to do the work and what DOE's backup plan is for doing the work until such a commitment can be arranged or if at any time in the future the commitments aren't being kept.

Response K-18: DOE will provide a cost estimate for stewardship in the next version of the LTS Plan. This estimate will include labor and funding for outside organizations. A federally funded on-site presence is planned for the Interpretive Center, and other monitoring and maintenance labor will be on site frequently, but not necessarily daily. You are correct that most of the stewardship activities will be conducted by subcontractor labor, but this is entirely consistent with how DOE conducted the remedial actions. The backup plan for subcontractor nonperformance would be for DOE's Grand Junction prime contractor to travel to the site and perform the work until such time as the subcontractor cures its deficiencies or until the subcontractor is replaced.

K-19

12. ' 3.0 B We found mention of, but no description of, aerial surveys as part of the periodic inspection process.

Response K-19: DOE intends to use aerial and space imagery to the extent practical to increase coverage of the cell surface and wide-area surveillance respectively, but has not yet validated these methods. Once this information is available, it will be included in the LTS Plan.

K-20

13. ' 3.0 B We didn't find references to specific supporting information such as standard operating procedures (SOPs), analytical methods, site-specific quality assurance plans, etc.

Response K-20: Initially, monitoring activities will be conducted using methods and procedures established for the Weldon Spring Site in the *Environmental Monitoring Plan* (EMP). The EMP describes procedures, methods, and quality assurance requirements for collecting and reporting groundwater monitoring data. Long-term, this type of information will be transmitted through procurement documents to subcontractors and referenced in the LTS Plan.

- K-21 | 14. ' 3.4 B In addition to evaluating whether the implemented remedy remains protective, we would anticipate that the periodic review process and periodic review report (5-Year Review) would also serve as a principal mechanism for monitoring, evaluating, improving, and reporting on all long-term management activities including O&M, long-term monitoring, institutional control monitoring and enforcement, community involvement, information systems, contingency action, and post-ROD changes. If DOE has other ideas about where these reporting needs should be contained, that also should be explained.

Response K-21: DOE agrees that the 5-year review report would serve as the principle mechanism for evaluating these long-term management activities and will revise the LTS Plan to expand upon the content of the 5-year review.

- K-22 | 15. ' 3.6, & 2, pg. 3-7 B This seems to infer that DOE Order 5400.1 requires additional environmental monitoring that DOE does not plan on conducting. If that is the case, we recommend identifying what this monitoring is and explaining why DOE does not plan on conducting it. We suggest that various requirements, like DOE Order 5400.1, be discussed in ' 1.2, legal authorities and requirements, as per my earlier comment.

Response K-22: DOE intends this paragraph to inform the reader that if DOE conducts this additional monitoring, that is not required for LTS, results will be reported. DOE will revise the text for clarity.

- K-23 | 16. ' 3.6.1.1, pg. 3-8 B There are several places, including here, where DOE discusses discretionary changes in LTSM activities in terms of Aif DOE determines@they need to be made. Some of these could be fairly important decisions and we recommend that DOE clarify its intentions with respect to coordination with EPA and other stakeholders when these determinations are made.

Response K-23: DOE will review the text and revise it to indicate which changes will be in response to a trigger condition specified in the text. In instances that changes are technically justified but are of lesser importance in monitoring protectiveness, DOE intends to write into the plan flexibility to respond to changing conditions without first revising the LTS Plan. [See Response E-2](#).

- K-24 | 17. ' 3.6.1.3, pg. 3-9 B A CERCLA documentation and public process for the quarry groundwater contingency needs to be discussed. Is this considered a contingency remedy selected in a ROD, or would it be implemented as ROD change?

Response K-24: Quarry groundwater contingency plans were discussed in detail in the Remedial Design/Remedial Action Work Plan for the Quarry Residuals Operable Unit. Future implementation of contingency actions is covered under the Quarry Residuals Operable Unit Record of Decision. See also [Response K-5](#).

- K-25 | 18. ' 3.9 Emergencies, Contingency Planning, and Corrective Action BThis Section will need to be analyzed in a CERCLA context. The term Acorrective action@is a term-of-art in RCRA and, while certain RCRA corrective action requirements may qualify as relevant and appropriate, CERCLA is the overarching process to be followed. There will need to be some determination made as to whether the various event scenarios qualify as maintenance activities or remedy failures requiring a re-evaluation of the selected remedy.

Response K-25: See [Response K-5](#).

- K-26 | 19. ' 3.13, pg. 3-21 BRegarding the list of stewardship documents, what does the asterisk indicate? The 5-Year Review Report appears to be missing from the list. Explain what the Regional Records Center is and what it means to be the designated Aarchive facility@.

Response K-26: The asterisk denotes those documents that the Middendorf-Kredell library has agreed to maintain. DOE will add the 5-year review report to the list. The regional records facility is the federal records repository in Kansas City, Missouri, to which inactive Weldon Spring site records are sent.